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| CHANKONG, DOHM |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on _13 April 2009_.
2a) ☒ This action is **FINAL**.          2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) _1, 6, 11, and 16_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _1, 6, 11, and 16_ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

**DETAILED ACTION**

1.      This action is in response to Applicant's amendment and arguments filed on 4/13/2009.

Claims 1, 6, 11, and 16 are amended.  Claims 2-6, 7-10, 12-15, and 17-20 were previously

canceled.  Accordingly, claims 1, 6, 11, and 16 are presented for further examination.


2.      This action is a final rejection.


### *Response to Arguments*

3.      Applicant argues that the cited references do not disclose a probability module for

comparing probabilities " wherein the probability is calculated based solely on the actions of the

single particular user during a past navigation and not as a member of a larger set of users."

Contrary to this argument, Horvitz clearly discloses "the user model can be...*for a given user,*

*based solely on page transition data collected by browser 35 on the client side for that user*"

(emphasis added) [column 27 «lines 15-20»].  Moreover, Horvitz discloses:

> "*Rather than performing statistical analysis on log data across an aggregate user community*, component 1610, in response to a URL from a user access for a currently accessed page, could, given an address for the user as supplied by the client computer, retrieve a stored profile for that user. The profile would specify which pages the user has accessed and the paths thereamong which the user has taken. Based on the retrieved profile, component 1610 would then construct a probabilistic user model *for this specific user*" (emphasis added) [column 47 «lines 56-66»].

For the foregoing reasons, Applicant's arguments are not persuasive.  The examiner

maintains that Horvitz discloses the limitation that the probability is calculated based solely on

the actions of a single particular user.  The rejection set forth in the previous action is therefore

maintained.

4.      With respect to the new limitation, previously cited Takagi discloses authenticating users

before monitoring their actions.  The act of authenticating a user effectively distinguishes

between a specific registered (authenticated) and unregistered (not authenticated) users.  See the

rejection that follows for claim mapping.


### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains.  Patentability shall not be negatived by the
> manner in which the invention was made.


5.      Claims 1, 6, 11, and 16 are rejected under 35 U.S.C §103(a) as being unpatentable over

Horvitz, U.S Patent No. 6.182.133, in view of Takagi et al, U.S Patent No. 5.881.231 ["Takagi"],

in further view of Barrett et al, U.S Patent No. 5.727.129 ["Barrett"] in further view of Malkin et

al, U.S. Patent No. 6.085.193 ["Malkin"].


6.      Malkin was cited in the PTO-892 filed on 7/18/2006.


7.      As to claim 1, Horvitz discloses a system for facilitating communication between a user

and a network of information items, comprising:

a remote data storage device for storing the information items, wherein the

information items are stored in the form of pages, and wherein the pages contain a plurality of

links to other information items [column 47 «lines 9-34» where : Horvitz's web server

corresponds to a remote data storage device];

a multi-layer architecture comprising:

a client device having a user interface program thereon, for allowing a user to

interface with the network and request the information items [column 8 «lines 16-59»];

a server device, in communication with the client device and in communication

with the remote storage device, for handling information requests from multiple clients

and for storing information retrieved from the data storage devices locally in a server

cache memory [column 26 «lines 30-44» where : Horvitz's proxy server corresponds to

the claimed server device];

a data collection module for collecting and storing successive actions of a single

particular authenticated user [Figure 6 | column 24 «line 43» to column 25 «line 30» | column 27

«lines 18-20» where : prefetching is based on user models that rely upon, in part, current and

prior interaction of the user and recent sequences of pages downloaded to a user] on a user

specific basis [column 47 «lines 56-66»];

a probability module in communication with the data collection module for calculating a

probability for the desirability of the links based on the action of the single particular user

[Figure 6 | Figure 16 «items 1610, 1615» | column 27 «lines 18-20] and for comparing the

probability to a predetermined threshold value associated with a level of risk of retrieving data

that may not be used to identify predicted links [column 4 «line 63» to column 5 «line 18» : see

response to arguments above for analysis comparing Horvitz's rate of refinement to the claimed

level of risk] and for retrieving the predicted information items associated with the links from the

remote data storage devices [column 4 «lines 30-36»] and enabling the storage of the predicted

information on both the client device layer and the server device layer of the multi-layer

architecture in advance of the single particular user's request for the selected information items

[column 4 «lines 20-47» | column 26 «lines 30-44»], the probability module further configured

to:

> update the probabilities assigned to the links with each successive user activity

[column 4 «lines 4-12» | column 9 «lines 59-62» where : the user model reflects the

probabilities of pages that may be prefetched];

> abort retrieving the predicted information items [column 4 «lines 50-62» | column

5 «lines 11-18»];

> continue retrieving the predicted information items from the remote data storage

devices and storing the predicted information items in the server cache memory if the

user requests the predicted information item [column 41 «lines 25-41»];

> download the user requested information item to the client from the server cache

memory [column 26 «lines 30-44»];

wherein the probability is calculated based solely on the actions of the single particular

user and not as a member of a larger set of users [column 27 «lines 18-20» | column 41 «lines

44-67»].

Horvitz does not teach a single particular user that is authenticated and that distinguishes

between a specific registered and unregistered users or the feature of aborting retrieval of

predicted items if the user requests an information item other than the predicted information

items. In the same field of invention, Takagi is directed towards a system for prefetching information [abstract]. Takagi further discloses first authenticating a user before collecting user actions [column 9 «lines 61-64»]. Authenticating a user effectively distinguishes between a specific registered (users that are authenticated) and unregistered users (users that are not authenticated). It would have been obvious to one of ordinary skill in art to modify Horvitz to include Takagi's user authentication feature. Takagi teaches that such a feature is beneficial to a prefetching system because it prevents user information from being leaked to other users [see Takagi, column 9 «lines 64-66»].

Further, Horvitz teaches aborting retrieval of predicted items but does not base the aborting feature on a user action. Barrett teaches a network data communication system wherein a probability module aborts the retrieval of predicted information items if the user requests an information item other than the predicted information items [abstract | Figure 7 <items 58, 64> | column 9 <lines 1-16>]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the functionality of module-initiated abortion of the retrieval of predicted information items in Horvitz's system. One would have been motivated to do this implementation to prevent unnecessary downloading of unwanted content in Horvitz's system based on a user action.

Finally, Horvitz does not teach a threshold value that is associated with a hardware cost of cache memory. Malkin teaches determining a threshold value based on the cost of cache availability [column 19 «line 61» to column 20 «line 5»: prefetching based on cache size and access cost to adding additional cache memory to the system where the cache size reads on the hardware cost]. It would have been obvious to one of ordinary skill in the art to have modified

Horvitz's prefetch system to include Malkin's teachings. Such a modification is an example of using a known technique [Malkin's cache cost to determine prefetching] to improve similar devices (methods, or products) [Horvtiz's prefetch system] in the same way [adding the cache cost factor in Horvitz's calculus for prefetching links].

8.      As to claims 6, 11, and 16, as they do not teach or further define over the previously claimed limitations, they are similarly rejected for at least the same reasons set forth for claim 1.

## *Conclusion*

**THIS ACTION IS MADE FINAL.**  Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action.  In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action.  In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOHM CHANKONG whose telephone number is (571)272-3942.  The examiner can normally be reached on Monday-Friday [8:30 AM to 4:30 PM].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571.272.3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dohm  Chankong/
Primary Examiner, Art Unit 2452